What is claimed is:

1. A process for converting hydrocarbons comprising contacting a hydrocarbonaceous feed at hydrocarbon converting conditions with a catalyst comprising a molecular sieve whose chemical composition, expressed in terms of mole ratios of oxides after calcination, is:

$$Al_2O_3 : 1.0 \pm 0.2\ P_2O_5 : x\ SiO_2 : y\ MeO\ ;\ z\ F$$

where x has a value of 0 to 0.2, y has a value of 0 to 0.2, z has a value of 0 to 0.10 and Me represents at least one element, other than aluminum, phosphorus or silicon, which is capable of forming an oxide in coordination with (AlO_2) and (PO_2) oxide structural units in the molecular sieve, the molecular sieve having, after calcination and in a hydrated state, the X-ray diffraction lines of Table II.

2. The process of Claim 1 wherein the molecular sieve is predominantly in the hydrogen form.

3. The process of Claim 1 wherein the molecular sieve is substantially free of acidity.

4. The process of Claim 1 wherein the process is a hydrocracking process comprising contacting the catalyst with a hydrocarbon feedstock under hydrocracking conditions.

5. The process of Claim 4 wherein the molecular sieve is predominantly in the hydrogen form.

6. The process of Claim 1 wherein the process is a dewaxing process comprising contacting the catalyst with a hydrocarbon feedstock under dewaxing conditions.

7. The process of Claim 6 wherein the molecular sieve is predominantly in the

hydrogen form.

8. The process of Claim 1 wherein the process is a process for improving the viscosity index of a dewaxed product of waxy hydrocarbon feeds comprising contacting the catalyst with a waxy hydrocarbon feed under isomerization dewaxing conditions.

9. The process of Claim 8 wherein the molecular sieve is predominantly in the hydrogen form.

10. The process of Claim 1 wherein the process is a process for producing a C_{20+} lube oil from a C_{20+} olefin feed comprising isomerizing said olefin feed under isomerization conditions over the catalyst.

11. The process of Claim 10 wherein the molecular sieve is predominantly in the hydrogen form.

12. The process of Claim 10 wherein the catalyst further comprises at least one Group VIII metal.

13. The process of Claim 1 wherein the process is a process for catalytically dewaxing a hydrocarbon oil feedstock boiling above about 350°F (177°C) and containing straight chain and slightly branched chain hydrocarbons comprising contacting said hydrocarbon oil feedstock in the presence of added hydrogen gas at a hydrogen pressure of about 15-3000 psi (0.103-20.7 MPa) under dewaxing conditions with the catalyst.

14. The process of Claim 13 wherein the molecular sieve is predominantly in the hydrogen form.

15. The process of Claim 13 wherein the catalyst further comprises at least one Group VIII metal.

16. The process of Claim 13 wherein said catalyst comprises a layered catalyst

comprising a first layer comprising the molecular sieve and at least one Group VIII metal, and a second layer comprising an aluminosilicate molecular sieve which is more shape selective than the molecular sieve of said first layer.

17. The process of Claim 1 wherein the process is a process for preparing a lubricating oil which comprises:

hydrocracking in a hydrocracking zone a hydrocarbonaceous feedstock to obtain an effluent comprising a hydrocracked oil; and

catalytically dewaxing said effluent comprising hydrocracked oil at a temperature of at least about 400°F (204°C) and at a pressure of from about 15 psig to about 3000 psig (0.103 to 20.7 MPa gauge) in the presence of added hydrogen gas with the catalyst.

18. The process of Claim 17 wherein the molecular sieve is predominantly in the hydrogen form.

19. The process of Claim 17 wherein the catalyst further comprises at least one Group VIII metal.

20. The process of Claim 1 wherein the process is a process for isomerization dewaxing a raffinate comprising contacting said raffinate in the presence of added hydrogen under isomerization dewaxing conditions with the catalyst.

21. The process of Claim 20 wherein the molecular sieve is predominantly in the hydrogen form.

22. The process of Claim 20 wherein the catalyst further comprises at least one Group VIII metal.

23. The process of Claim 20 wherein the raffinate is bright stock.

24. The process of Claim 1 wherein the process is a process for increasing the octane of a hydrocarbon feedstock to produce a product having an increased aromatics content comprising contacting a hydrocarbonaceous feedstock which comprises normal and slightly branched hydrocarbons having a boiling range above about 40°C and less than about 200°C under aromatic conversion conditions with the catalyst.

25. The process of Claim 24 wherein the molecular sieve is substantially free of acid.

26. The process of Claim 24 wherein the molecular sieve contains a Group VIII metal component.

27. The process of Claim 1 wherein the process is a catalytic cracking process comprising contacting a hydrocarbon feedstock in a reaction zone under catalytic cracking conditions in the absence of added hydrogen with the catalyst.

28. The process of Claim 27 wherein the molecular sieve is predominantly in the hydrogen form.

29. The process of Claim 27 wherein the catalyst additionally comprises a large pore crystalline cracking component.

30. The process of Claim 1 wherein the process is an isomerization process for isomerizing C_4 to C_7 hydrocarbons, comprising contacting a feed having normal and slightly branched C_4 to C_7 hydrocarbons under isomerizing conditions with the catalyst.

31. The process of Claim 30 wherein the molecular sieve is predominantly in the hydrogen form.

32. The process of Claim 30 wherein the molecular sieve has been impregnated with at least one Group VIII metal.

33. The process of Claim 30 wherein the catalyst has been calcined in a steam/air mixture at an elevated temperature after impregnation of the Group VIII metal.

34. The process of Claim 32 wherein the Group VIII metal is platinum.

35. The process of Claim 1 wherein the process is a process for alkylating an aromatic hydrocarbon which comprises contacting under alkylation conditions at least a molar excess of an aromatic hydrocarbon with a C_2 to C_{20} olefin under at least partial liquid phase conditions and in the presence of the catalyst.

36. The process of Claim 35 wherein the molecular sieve is predominantly in the hydrogen form.

37. The process of Claim 35 wherein the olefin is a C_2 to C_4 olefin.

38. The process of Claim 37 wherein the aromatic hydrocarbon and olefin are present in a molar ratio of about 4:1 to about 20:1, respectively.

39. The process of Claim 37 wherein the aromatic hydrocarbon is selected from the group consisting of benzene, toluene, ethylbenzene, xylene, naphthalene, naphthalene derivatives, dimethylnaphthalene or mixtures thereof.

40. The process of Claim 1 wherein the process is a process for alkylating an aromatic hydrocarbon which comprises contacting under alkylation conditions an aromatic hydrocarbon with a C_{20+} olefin under at least partial liquid phase conditions and in the presence of the catalyst.

41. The process of Claim 40 wherein the molecular sieve is predominantly in the hydrogen form.

42. The process of Claim 41 wherein the aromatic hydrocarbon and olefin are present in a molar ratio of about 1:15 to about 25:1, respectively.

43. The process of Claim 41 wherein the aromatic hydrocarbon is selected from the group consisting of benzene, toluene, ethylbenzene, xylene, naphthalene, naphthalene derivatives, dimethylnaphthalene or mixtures thereof.

44. The process of Claim 1 wherein the process is a process for transalkylating an aromatic hydrocarbon which comprises contacting under transalkylating conditions an aromatic hydrocarbon with a polyalkyl aromatic hydrocarbon under at least partial liquid phase conditions and in the presence of the catalyst.

45. The process of Claim 44 wherein the molecular sieve is predominantly in the hydrogen form.

46. The process of Claim 44 wherein the aromatic hydrocarbon and the polyalkyl aromatic hydrocarbon are present in a molar ratio of from about 1:1 to about 25:1, respectively.

47. The process of Claim 44 wherein the aromatic hydrocarbon is selected from the group consisting of benzene, toluene, ethylbenzene, xylene, or mixtures thereof.

48. The process of Claim 40 wherein the polyalkyl aromatic hydrocarbon is a dialkylbenzene.

49. The process of Claim 1 wherein the process is a process to convert paraffins to aromatics which comprises contacting paraffins under conditions which cause paraffins to convert to aromatics with a catalyst comprising the molecular sieve and gallium, zinc, or a compound of gallium or zinc.

50. The process of Claim 1 wherein the process is a process for isomerizing olefins comprising contacting said olefin under conditions which cause isomerization of the olefin with the catalyst.

51. The process of Claim 1 wherein the process is a process for isomerizing an isomerization feed comprising an aromatic C_8 stream of xylene isomers or mixtures of xylene isomers and ethylbenzene, wherein a more nearly

equilibrium ratio of ortho-, meta and para-xylenes is obtained, said process comprising contacting said feed under isomerization conditions with the catalyst.

52. The process of Claim 1 wherein the process is a process for oligomerizing olefins comprising contacting an olefin feed under oligomerization conditions with the catalyst.

53. A process for converting oxygenated hydrocarbons comprising contacting said oxygenated hydrocarbon under conditions to produce liquid products with a catalyst comprising A molecular sieve whose chemical composition, expressed in terms of mole ratios of oxides after calcination, is:

$$Al_2O_3 : 1.0 \pm 0.2\ P_2O_5 : x\ SiO_2 : y\ MeO\ ;\ z\ F$$

where x has a value of 0 to 0.2, y has a value of 0 to 0.2, z has a value of 0.02 to 0.10 and Me represents at least one element, other than aluminum, phosphorus or silicon, which is capable of forming an oxide in coordination with (AlO_2) and (PO_2) oxide structural units in the molecular sieve, the molecular sieve having, after calcination and in a hydrated state, the X-ray diffraction lines of Table II.

54. The process of Claim 53 wherein the oxygenated hydrocarbon is a lower alcohol.

55. The process of Claim 54 wherein the lower alcohol is methanol.

56. The process of Claim 1 wherein the process is a process for the production of higher molecular weight hydrocarbons from lower molecular weight hydrocarbons comprising the steps of:

(a) introducing into a reaction zone a lower molecular weight hydrocarbon-containing gas and contacting said gas in said zone under C_{2+} hydrocarbon synthesis conditions with the catalyst and a metal or metal compound capable of

converting the lower molecular weight hydrocarbon to a higher molecular weight hydrocarbon; and

(b) withdrawing from said reaction zone a higher molecular weight hydrocarbon-containing stream.

57. The process of Claim 56 wherein the metal or metal compound comprises a lanthanide or actinide metal or metal compound.

58. The process of Claim 56 wherein the lower molecular weight hydrocarbon is methane.